

For more information:

Please visit <http://www.craft.foresthreats.org> to learn more about CRAFT or contact EFETAC or UNC Asheville's NEMAC for additional information:

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U.S. Department of Agriculture, Forest Service
Southern Research Station
Eastern Forest Environmental
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The Comparative Risk Assessment Framework and Tools (CRAFT)

A structured, comprehensive approach to natural resources planning and analysis

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Forests are naturally complex and have become increasingly more difficult to manage due to existing and emerging environmental threats. As a result, forest management faces many obstacles, but none more challenging than an uncertain future. How will climate and land use change, disease, or invasive species impact forest health? Forests are in constant flux and competing demands, and consequent tradeoffs, for clean air and water, forest products, and recreation add further management challenges.



CRAFTing Solutions for Forest Managers

To help address these challenges, the USDA Forest Service's Eastern Forest Environmental Threat Assessment Center (EFETAC) and the University of North Carolina Asheville's National Environmental Modeling and Analysis Center (NEMAC) designed a planning framework, called the Comparative Risk Assessment Framework and Tools (CRAFT). CRAFT is a user-friendly, Web-based support system that builds on the National Environmental Policy Act (NEPA) framework for managing public lands and approaches forest issues comprehensively. The tool incorporates decision making techniques and guides managers and diverse stakeholders through

- a structured approach for identifying and clarifying objectives;
- a way to gain a feasible set of alternatives;
- an ability to match real-life problems to existing models and tools;
- a method of calculating the risks and tradeoffs associated with different management scenarios.

CRAFT uses imagery to model landscape variability.

How Does CRAFT Work?

CRAFT emphasizes *comparative* risk assessment, empowering users to focus on measurable values, be more inclusive of tradeoffs, and understand associated uncertainties. CRAFT focuses on a three-part approach to help managers and groups make informed decisions:

- **Values** – identification of diverse stakeholders and resource needs
- **Probabilities** – consideration of likely effects and uncertainties
- **Tradeoffs** – broadened understanding of conflicts

The CRAFT Process

CRAFT uses four primary stages to help users directly examine potential risks:

- **Specifying Objectives**—*What is the problem?* It is important to prioritize management objectives

in order to anticipate possible conflicts and competing values. CRAFT can help organize management and stakeholder values using clear and effective techniques and exercises.

- **Designing Alternatives**—*What to do?* An ecosystem is complex, therefore different alternatives can have varying effects. CRAFT helps design alternatives based on how well they might satisfy multiple objectives.
- **Modeling Effects**—*What could happen?* CRAFT links objectives, actions, and probable consequences using a tool called a belief network. It models complex environmental dynamics and displays the consequences and uncertainties of alternative actions.
- **Synthesis**—*What to communicate?* All information generated in previous steps is compiled, providing an enhanced understanding of the interplay among scenarios, uncertain outcomes, and diverse values.

Additional CRAFT Resources

CRAFT features a wealth of online resources, including a tutorial and CRAFTiPedia—a “wiki” style reference database and glossary. For team projects, the CRAFT online tool can store and share diagrams, text, tables, data, and models created during the decision-making process. UNC Asheville's NEMAC is available to provide assistance, team training, and group workshops.

